



**THE EFFECTS OF STRESS IN A BUSINESS ENVIRONMENT AND
HOW THE PROJECT MANAGER COULD HANDLE THE PRESSURE
IN THE PROJECT TEAM**

By

Vasilios D. Michalopoulos

A THESIS REPORT

**Presented to the Project Management Program in the
School of Management of
City University of Seattle**

**In Partial Fulfillment of the Requirements
For the Degree of**

MASTER OF SCIENCE OF PROJECT MANAGEMENT



June/2009



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This Master Thesis was elaborated in the frame of the collaboration of the City University of Seattle and the Graduate Technological Education Institute (T.E.I.) of Piraeus to fully implement at TEI of Piraeus Campus the CU's MS in Project Management Program approved by the Hellenic Ministry of National Education and Religion Affairs as by decision E5/58291 published in the Hellenic Government Gazette (FEK) B/924/5- July-2005.



June/2009

THE EFFECTS OF STRESS IN A BUSINESS ENVIRONMENT AND HOW THE PROJECT MANAGER COULD HANDLE THE PRESSURE IN THE PROJECT TEAM

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DEDICATION

This Master's Thesis is dedicated to my father's memory, the person who prompted me to start the Master in Project Management.

Special thanks to my mother Virginia and my sister Maria for their unlimited patience and encouragement, without which this course of study in Project Management could never have been completed.

ACKNOWLEDGEMENTS

To my instructor Dr. Konstantinos Kontesis who provided me all the necessary and essential guidelines in order to achieve the desirable results.

BIOGRAPHY**Vasilios D. Michalopoulos**

Vasilios D. Michalopoulos was graduated of Agii Anargiri High School in Athens and accomplished to pass the examinations to Technological Education Institute of Larisa in the Department of Project Management in 2000. He succeeded in effecting his studies after four years. Vasilios has worked in the space of course with eight months contract in the Hellenic Ministry of Tourism. For the time being he is not working, but he is focused on fulfilling successfully his duty and obligations towards the program of Postgraduate Studies in Project Management conducted by the City University and T.E.I. Piraeus.

ABSTRACT**Vasilios D. Michalopoulos****The effects of stress in a business environment and how the project manager could handle the pressure in the project team**

Stress is a very important issue, is part of life in a fast-paced society. Stress is a naturally occurring reaction of your body to psychological or physical demands of the environment.

In many cases, stress is accepted as part of daily life, and people do little to cope with it consciously. Although it is impossible to eliminate stress completely and you need a certain amount of stress to be active and productive, there are three ways to reduce unwanted stress or manage it productively:

- Manage your physical and psychological well-being so you can resist harmful effects of stressful events.
- Monitor your present level of stress so that you can recognize early warning signs of stress and do something about the problems causing it.
- Avoid extremely stressful situations by eliminating the causes of stress

Stress management begins with actively listening to the patient and proceeds through a detailed assessment of the patient's needs.

Every project needs someone who, regardless of his title, performs the functions of project management. It is a role that can be fulfilled in a few hours a week on small projects or spread among many people on very large projects. It also must be understood that the primary responsibility for a project manager, on the one hand, is to lead all the stakeholders (customers, vendors and project team) and encourage them to work together during the course of a project and, on the other hand, the project manager should be in position to handle stress in the project team because "*Good management is Stress Management*".

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Chapter 1 - Introduction

1.1 Nature of the study

Stress plays an important role in how successful or unsuccessful we are in our productive work activity, and in general in enjoying our lives.

Stress is not necessarily negative for our performance. Some level of stress is desirable to generate enthusiasm, creativity, and productivity. However, excessive levels of stress could become counterproductive if the situation does not require this elevated level of stamina.

It is important that a business organisation takes serious interest in insuring that their employees develop the ability to control the level of stress. This adequacy of stress level will yield higher levels of productivity in a business organisation.

1.2 Needs Assessment

Stakeholders for this thesis include the project manager and the employees of the HAI. This thesis will have an effect not only for the project manager but also for the employees.

The major point of view is to provide the project manager with skills to reduce work overload and free his employees of job stressors.

The project manager should a) support his staff, b) make sure his staff has a clearly defined role, c) encourage his staff to talk to him, d) talk to all his staff regularly, and e) give support and encouragement to his staff.

1.3 Purpose of the Study

The purpose of this study is to investigate the impact of job stress on the employee's performance, to find out the reason why people get stressed on their jobs and what techniques the project manager can use to in order to reduce or to eliminate the stress in the project team

1.4 Relation to the Program of Study

During PM 506 (Managing Projects with people and teams), I was impressed listening the instructor saying that the personal demands on the project manager are numerous in today's complicated project environment. Stressors facing the project manager come from organization issues.

The project manager needs to develop a great deal of personal awareness and understanding in being able to define his/her sources of stress, because what is stressful for one project manager may not be stressful for another project manager.

I felt perturbed and after a huge cogitation with myself I understood that stress and project management go together. This gave me the idea to grapple with this issue.

Chapter 2 - Problem Statement

2.1 Problem Statement

In a big manufacturing company, which has a lot of orders to carry out and the assembling pressure levels are high, unless the project management is fully engaged, the effects will appear in a sense of disorganization, lowered productivity and as a result lower margins of profit, while some health problems and behavioral changes will also appear for the employees.

2.2 Rationale

We live in an epoch when a mistake cannot be forgiven and there is no time to waste and relax. According to Rice (1992), stress can be harmful for the human being. Too little stress is as bad as too much. That is why the aim of stress management is not to eliminate stress entirely but to control it so an optimal level of stress is present.

According to Beehr and Newman, there are three negative personal outcomes from work stress: "psychological health symptoms, physical health symptoms, and behavioral symptoms". "Psychological symptoms include frustration, anger, withdrawal, and depression", "Physical symptoms include increased heart rate and blood pressure and chronic fatigue", and "Behavioral symptoms include work avoidance

and absenteeism as well as lowered performance and productivity" (1978, p. 673).

Stress as the employee experiences, is associated with poor job performance, low job involvement and loss of a sense of responsibility to the job. The employee also displays a lack of concern for the organisation and for colleagues. "The PM who is fully engaged in a personalized approach to stress management is most likely to remain vital, excited and content, even in the face of complex demands and challenges". Flannes (2001, p 335)

Flannes in his book suggest that "there are many approaches that a project manager can use to handle his own and his team stress". "The project manager should apply these tools sociological tools, interpersonal tools, emotional tools, physical - somatic tools, spiritual tools" (2001, p. 334).

2.3 Objective

The objective target of this study is to identify the types of stress upon the employees, to investigate the impact of job stress on the employee's performance and how the Project Manager could handle the pressure in the project team of a big company in Greece called HIL Aerospace Industry.

Chapter 3 - Review Of Literature

3.1. Introduction

"The competitive environment which all people face and live in, and the desperate need to make more and more money so as to ensure them a well being puts everybody in a very pressing situation. What caused it? The answer is simple...the stress". (Stuttaford, 2004, p 6)

3.2. Definition of stress

According to the American Institution of Stress "There has been no definition of stress that everyone accepts. Therefore, it's difficult to measure stress if there is no agreement on what the definition of stress should be. People have very different ideas with respect to their definition of stress. Probably the most common is, "physical, mental, or emotional strain or tension". Another popular definition of stress is, "a condition or feeling experienced when a person perceives that demands exceed the personal and social resources the individual is able to mobilize." "Stress is the threat to the quality of life and to Physical and Psychological well-being" (Griffin, 1999 p. 357), "The concept of stress is somewhat like the illusive concept of love: everyone knows what the terms means but no two people would define it the same way" (Rice, 1992, p. 3),

Slaski believes that stress, "primarily concerns negative person-environment relationships, cognitive appraisals and emotional response states such as fear, anger, guilt and shame" (2003, p.p 233-239), 'Stress' is a word which is rarely clearly understood and there is no single definition of the term' (Stranks, 2005, p.1)

3.3 The stress models

Cassidy (1999, p.p 6-8) in his book "Stress, Cognition and Health" inform us about the three different models of stress: the stimulus model, the response model and the transactional model.

3.3.1 The Stimulus model

"The stimulus model assumes that stress is something which occurs in the environment and makes a demand upon the person; for example, the stress of work. Workers have to deal with heavy workloads, conflicting demands from families and work, and so forth. In fact what this use of the term invokes are the sources of stress, or the external demands placed upon the person, in other words stressors" (Holmes and Rahe, 1967, p.213-218)

3.3.2 The Response model

"The response model refers to the person's experience. When we use this approach we are inferring an abstract experience called stress from observing symptoms such as irritability, lack of energy, headaches. This approach really addresses the consequences of the demands, or attempts to deal with the demands. They include behavioral, emotional and physical symptoms exhibited as a consequence of particular sets of demanding life circumstances". (Cassidy, 1999, p. 7)

3.3.3 The Transactional model

"The more recent transactional models views stress as a transaction between the person and their environment and incorporates both stimulus and response perspectives as part of a process. It entails a much more complex view of stress than the simplistic partial focus of the stimulus and response models, and as a consequence it reflects more realistically the reality of stress in everyday life. "

(Cassidy, 1999, p. 8)

3.4 The Nature of stress

Victor Rojas and Brian Kleiner in their article "The Art and Science of Effective Stress Management" highlights that "Stress has always been an integral part of our daily

life since prehistoric times. Stress is not necessarily negative for our performance, It is important that a business organization takes serious interest in procuring that their employees develop the ability to control the level of stress. There are several techniques to manage the stress levels" (2000, 103-106).

3.5 Dealing with Stress

The secret of managing stress is to look after yourself and, where possible, to remove some of the causes of stress. There are many ways to cope with stress such as to accept offers of practical help, to do one thing at a time - don't keep piling stress on stress, to know your own limits - don't be too competitive or expect too much of yourself, to talk (friend), to walk away from stressful situations, to try to spend time with people who are rewarding rather than critical and judgmental and finally by using relaxation techniques like yoga etc.

3.6 Benefits of Stress

According to the department for work and pensions (2002, p.11), stress do not have only negative effects, but and benefits too.

Pressure and stress help to motivate us to learn, to achieve, be more productive, achieve our goals, and be more

successful, it challenges us to achieve more than we might otherwise attain, it stimulates us to get things done.

Stress and tension can be used in creative ways to make use of energy that would otherwise be lost through distress, it can be a vital ingredient that stimulates personal growth and finally stress has a positive function in that it can act as a warning signal, rather like the red light on your car dashboard, which encourages you to be alert, prepared and ready to act.

3.7 Definition of work stress

"Job stress is viewed as a general nervousness or anxiety associated with the job, affecting one's emotional and physical well-being" (Netemayer, 2004, p. 50), "Work-related stress is the response people may have when presented with work demands and pressures that are not matched to their knowledge and abilities and which challenge their ability to cope" (Leka, 2003 p. 6),

Rice (1992, p.181) referred to Caplan (1975) who tried to identify what job stress means. Caplan (1975), presented work stress as the kind of stress which results from job features that pose a threat to the individual.

Moreover Terry Beehr and John Newman (1978) "reviewed numerous definitions of job stress as interaction of work conditions with worker traits that changes normal

psychological or physiological functions or both (p.p 655-699). Health and Safety Executive (2007) says that "work stress is a major cause of occupational ill health. This can result in sickness absence, high staff turnover and poor performance".

3.8 Symptoms of work stress

According to Beehr and Newman (1978) and after reviewing many job stress studies they concluded that work stress has three negative personal results: a) Psychological Symptoms, b) Physical Symptoms and c) Behavioral Symptoms.

a) **Psychological Symptoms:** "The following symptoms occurs in various occupational settings as a result of work stress

- Anxiety, tension, confusion and irritability
- Feelings of frustration, anger, and resentment
- Emotional hypersensitivity and hyperactivity
- Suppression of feelings, withdrawal and depression
- Reduced effectiveness in communication
- Feelings of isolation and alienation
- Boredom and job dissatisfaction
- Loss of spontaneity and creativity

- Lowered self-esteem" (Rice, 1999, p.p 195-196)

b) **Physical Symptoms:** "The major physical symptoms of job stress are shown in the following list:

- Increase heart rate, blood pressure, and potential cardiovascular disease
- Increased secretions of stress hormones
- Increased frequency of bodily injuries and accidents
- Physical fatigue, and possible chronic fatigue syndrome
- Respiratory problems, including aggravation of existing conditions
- Skin disorders
- Headaches, low back pain and muscular tension
- Sleep disturbances" (Rice, 1999, p.196)

c) **Behavioral Symptoms:** "Several behavioral symptoms reveal job stress:

- Procrastination and avoidance of work
- Lowered performance and productivity
- Increased alcohol and drug use
- Outright sabotage on the job
- Increased visits to the dispensary

- Loss of appetite and sudden weight loss
- Aggression, vandalism and stealing
- Deteriorating relationships with family and friends
- Suicide or attempted suicide" (Rice, 1992, p.185)

However, and according to Stranks (2005) "stress within the organization cannot be disregarded. Typical indications of an organization manifesting high stress levels amongst employees at all levels are: absenteeism, poor timekeeping, high labour turnover, high sickness absence rates, low productivity, Industrial unrest and resistance to change in working procedures" (p.p 41-44)

3.9 Dimension of job stress

Mr Rice (1992) in his book "Stress and Health" highlights the three dimensions of job stress. These are:

1. "Work stress generally involves both the organization and its employees. Job stress is not a private matter for the employee to deal with alone and in isolation. Employees may transport personal and family problems to the job, but work problems also spill over to the home" (Rousseau, 1978, p.p 513-517)
2. "Job stress produces negative effects for both the company and the employee. For the organization, the

results are disorganization, disruption in normal operations, lowered productivity, and lower margins of profit. For the employee, the effects are threefold: increased physical health problems, psychological distress, and behavioral changes" (Rice, 1992, p.181)

3. "Job stress requires both organizational and personal solutions" (Ivancevich, Matteson, Freedman, Phillips, 1990, p.p 252-261).

3.10 Source of Work Stress

The sources of stress vary considerably from person to person. However, a number of the more common sources of stress can be considered.

Having in mind the words of Rice (1999, p.p 198-208), the sources of job stress are:

- Related to Job conditions
- Role stress
- Interpersonal factors
- Career development
- Organizational structure

3.10.1 Job conditions

The major factor that it related to job conditions and can cause work stress is the "work overload". Mr Rice (1999) informed us that the "work overload can be divided in quantitative overload and qualitative overload.

Quantitative overload results when the physical demands of the job exceed the worker's capacity. This occurs when the employee must do too much work in too short time.

Qualitative overload results when work is too complex or difficult. This occurs when the job, taxes either the technical or mental skills of the worker and when a manager must make decisions that affects company production and the employee's future."(p.p 198-199)

Some possible consequences from this type of stressor are the physical and mental fatigue, job burnout and increased irritability and tension.

3.10.2 Role Stress

One of the most important sources of stress is the role stress. Role stress is composed of two major related components: role conflict and role ambiguity. Both role conflict and role ambiguity are particularly problematic among boundary spanning occupations.

"Role conflict and role ambiguity have been shown to have significant effects on personal and organizational outcomes". (Fisher and Gitelson, 1983, p.p 320-333).

Some possible consequences from this type of stressor are the increasing of anxiety and tension, low job performance and low job performance.

3.10.3 Interpersonal factors

According to Rice (1999, p.206) "personal relationships on the job are very important to job satisfaction". Interpersonal factors appear when there is a poor work and social support system and in case that there is a lack of management between the worker and the organization.

Some possible consequences from this type of stressor are the increasing of tension and job dissatisfaction.

3.10.4 Career development

Rice (1999) in his book "stress and health" is considering that "people bring several specific hopes to a job, they hope for rapid or at least steady advancement (p.206). They hope for some freedom in the job and increased earning power. Also they hope to find solutions to certain problems. Four factors are related to stress in

career development. These are: under promotion, over promotion, lack of job security and frustrated ambitions.

Some possible consequences from this type of stressor are the low productivity, the loss of self esteem, increase of anger and job dissatisfaction.

3.10.5 Organizational Structure

According to Rice (1999) "the structure of a business can produce stress" (p.207). Most often employees complain about rigid structure and inadequate supervision from management.

Some possible consequences from this type of stressor are: low motivation and job dissatisfaction.

3.11 What cause work stress?

It's important to recognize the common causes of stress at work so that you can take steps to reduce stress levels where possible.

The causes of work stress can be classified as follows:

Job design - heavy workloads, not enough rest breaks, long work hours, shift work, meaningless tasks.

Management style - poor communication, employees not involved in decision-making.

Relationships at work - lack of support or help from coworkers and supervisors, unfriendly atmosphere.

Work roles - too much responsibility, unclear job expectations.

Career concerns - job insecurity, no chance for promotion.

Unsafe or unhealthy working conditions - noise, ergonomic problems, chemicals, dangerous work.

3.12 The effects of work Stress

Stress affects different people in different ways. According to Leka (2003), "there are two types of stress effects: a) Affects on individuals and b) Affects on organizations.

3.12.1 Affects on individuals

Work stress can cause unusual and dysfunctional behavior at work and contribute to poor physical and mental health. When people are under stress they find it difficult to have a balance between work and non - work life.

When affected by work stress people may become increasingly distressed and irritable, become unable to relax or concentrate, have difficulty thinking logically and making decisions, enjoy their work less and feel less

committed to it, feel tired, depressed, anxious and experience serious physical problems such as : a) heart disease, b) increase of blood pressure" (p.p 8-9).

3.12.2 Affects on organizations

Leka continuous by noting that " unhealthy organizations do not get the best from their workers and this may affect not only their performance in the increasingly competitive market but even their survival.

Work stress is thought to affect organizations by increasing absenteeism, unsafe working practices and accidents rates, complaints from customer and clients, by decreasing commitment to work and by damaging the organization's image both among its workers and externally" (2003, p.9).

3.13 Effects of stress in job performance

Stranks (2005), mention the eight ways that has affection in the job performance:

These are:

1. " **Absenteeism:** Absenteeism, especially on Monday mornings, or in the taking of early/extended meal breaks is a typical manifestation of stress.
2. **Accidents:** People suffering stress at work can rapidly become problem drinkers. Such people have three times

the average number of accidents; many accidents incorporate stress-related indirect causes.

3. **Erratic job performance:** Alternating between low and high productivity due, in some cases, to changes outside the control of the individual, is a common symptom of stress within an organization.
4. **Loss of concentration:** Stressful events in people's lives commonly result in a lack of the ability to concentrate, whereby a person is easily distracted, or an inability to complete one task at a time.
5. **Loss of short-term memory:** This leads to arguments about who said, did or decided what.
6. **Mistakes:** Stress is a classic cause of errors of judgment, which can result in accidents, wastage, rejects. Such mistakes are frequently blamed on others.
7. **Personal appearance:** Becoming abnormally untidy, perhaps smelling of alcohol is a common manifestation of a stressful state.
8. **Poor staff relations:** People going through a period of stress frequently become irritable and sensitive to criticism. This may be accompanied by 'Jekyll and Hyde' mood changes, all of which have a direct effect on staff relationships" (p.44)

3.14 Qualities for a Project Manager that improve projects team efficiency

The project manager is the person responsible for accomplishing the project objectives. The project manager is integrating the necessary activities to develop a project plan, to execute the plan and to make changes to the plan.

3.14.1 Project Manager Skills

A project manager should have the following skills in order to be effective. These skills are:

1. "Communication skills.

- a) Listening
- b) Persuading

This is the most important skill that a PM should have. This deals with keeping the stakeholders well informed by Timely distribution of project data and updates to stakeholders". (Pinto, 1998, p.13)

2. "Organization skills

- a) Planning
- b) Goal setting
- c) Analyzing

Although you may not need intense technological skills but it is important that PM has a deep Organization

skills (Organizational policies, procedures & Planning) this would help in analyzing the Scope, Time, cost, quality and risk." (Smith, 2007, p.78)

3. "Team - building skills

- a) Empathy
- b) Motivation
- c) Esprit de corps

PM should be proficient in facilitating team meetings, conflict resolution and handling diverse team. Should ensure motivation and empowerment of team members by encouraging the Suggestion and recommendations of the team and allowing the team share their opinions" (Kerzner, 2003, p.p 148-149)

4. "Leadership skills

- a) Setting example
- b) Energy
- c) Vision
- d) Delegating
- e) Positive outlook

Project Managers should be positive, decisive, motivating, empowering and energetic" (Smith, 2007, p.78)

5. "Coping skills

- a) Flexibility
- b) Creativity
- c) Patience
- d) Persistence

This implies Project Managers should be creative with solutions and flexible with results and they need to Patient and persistent with stakeholders. Coping with stakeholders is necessary for successful solution. (Pinto, 1998,p.13)

6. "Technological skills

- a) Experience
- b) Project knowledge" (Smith, 2007, p.78)

Effective project manager should be familiar with degree of technological knowledge to complete the project. This will help identifying alternative solutions and communicating risks associated to technology to various stake holders and to route the problems to the right SME's for solution.

Project Managers interact with different types of people at different level within the organization and outside the organization. Since their responsibilities include directing and coordinating various resources throughout the life cycle of the project, it is important

the Project Managers have certain characteristics to ensure project success.

3.14.2 Characteristics of an effective Project Manager

According to Pinto (1998) "there are five main characteristics. These are:

Flexible: Flexibility is required for a PM especially when dealing with new team members who may need specific, firm direction to get started. PM should be able to adopt various styles of leadership with various people.

Credible: PM should be Trustworthy, Competent, Dependable and honest.

Tolerant: Considering the fact that the Resources, Goals and Objectives are often vague, PM Should be tolerant. A Non Tolerant Project Managers becomes stressed when working with ambiguous projects. While dealing with varied group of stakeholders having different objectives and opinions, Project Managers should be able to approach each group with understanding and Tolerance for successful project completion

Innovative: PM should be innovative with solutions as the Resources and capabilities needed to complete a project may be scarce.

Available: As there are many aspects of managing a Project Managers must be available to spend time with various

people involved in the project for ensuring project success.” (p.p 3-6)

3.14.3 The S.M.A.R.T approach

The project manager must set clear expectations and goals for the beginning and encourage the team to refine the goals so that the team gains ownership of the project, gains synergy builds cooperation, and reduce the areas of conflict.

Ms Brown (2007), mention the “S.M.A.R.T approach to goal setting:

Specific: each goal identifies a specific problem that you are trying to solve. The specificity helps establish a direction and focus. Example: “Company A wants to reduce localizations costs”.

Measurable: you must be able to determine whether or not you have successfully achieved the goal. Example: “Company A wants to reduce localizations costs by 20%)”

Attainable: the team must be able to achieve the goal. You want the goal to be challenging but achievable.

Relevant: the goals of the team must mesh with those of senior management and with the overall corporation strategy.

Time - bound: without a deadline, the project will not be given the appropriate priority. The deadline should be realistic." (p.p 9-10)

Chapter 4 - Methodology used in this study

4.1 Introduction

The purpose of the methodology must be significant with the purpose of the Thesis. In this case the purpose of this study is to investigate the impact of job stress on the employee's performance, to find out the reason why people get stressed on their jobs and what techniques the project manager can use to in order to reduce or to eliminate the stress in the project team.

In this chapter, the research methodology that this study deploys will be represented. It was planned; at the early phase of the proposal of this project to be used the results and all the necessary objectives that will derive from interviews and questionnaires but undesirable outcomes did not meet my expectations.

I managed to get data only from the questionnaires that I gave to the employees and I also failed to get an interview from the company's project manager because the company **did not had a project manager.**

Stress and its impact on the employees, is a long and complex process which needs analysis over long period of

time and in some cases depending on the population examined it can cost the researcher some great amount of money.

Based on the literature review by following a critical analysis of the available resources and by supporting the above by my own experience dealing with project management these two years of study, it can be derived that a project manager in order to deal with the pressure situations in the project team he should:

- Be a leader
- Staff the team
- Use Time management strategies
- Use Conflict resolution methods
- Motivate the project team

4.1.1 Project manager as a Leader

Many people still believe that good leaders are born, not made. But that belief is not strictly true. Good leaders can be developed. One only has to look at the potential in each human being and work with what you have. You might be surprised how many people can be developed into leaders, regardless of what field of endeavor they enter

Leadership is something that can easily be explained, but it is very difficult to put into practice. It's important to understand what it is and the various things that make up leadership.

Leadership is the process of influencing an organization (or group within an organization) in its efforts towards achieving an aim or goal.

Good leadership accommodates the needs and values of those who need to be led. Good leadership takes into account the skills and capabilities of those with whom the leader shares leadership. Good leadership adapts to the purpose and future needs of the organization.

According to Pinto (1998), there are at least "five related characteristics that are essential for an effective project leader:

Credibility

"Credibility refers to a combination of the manager's expertise and trustworthiness in the eyes of the project clients, the manager's supervisors, functional managers, subordinates, and external consultants.

Creative Problem solver

The willingness to take risk and attempt innovative approaches can mean the difference between success or failure in determining the best tradeoffs between quality, cost and time.

Tolerance for Ambiguity

One of the most frequently cited characteristics of project is ambiguity, Some projects has ambiguous ends, goals or objectives, it is not clear what resources are available or have been authorized or what methodology or approach is most suitable to achieve the project ends.

Flexible Management Style

Situational leadership principles suggest that managers who possess a wide repertoire of management styles have an advantage over managers who have a relatively narrow range of styles.

Effective Communication Skills

Having effective communication skills is an asset in many managerial jobs, but it is especially critical in project leadership roles". (p.p 4-5)

4.1.2 Staffing the Team

The majority of the authors like Brockett P. and Ettleson B (1999), Wysocki (2007) and Meredith (2003) viewed that in many organizations, the project manager decides or helps decide who should become members of the project team. Good team members are critical to the success of the project. A member of a project team should have the following characteristics:

Communication Skills: team members should have skill in both written and oral communication. Communication is one of the biggest problems in any organization. (Brockett, 1999, p.69)

Relation Building Skills: projects are not done in a vacuum. A project team often needs input and assistance from people outside the team. Good working relationships must also be developed within the team. Strong team relationships will help create a successful project outcome. Wysocki (2007 p.p 300-301)

Ability to work on a team: project team members cannot be loners. Team members must feel that they can depend on each

other. Trust is very important for the successful outcome of the project. Wysocki (2007 p.p 301)

High quality technical skills: team members must be able to solve most of the technical problems of the project without resource to outside assistance. (Meredith, 2003, p.131)

High self-esteem: a prime law for projects is: "Never surprise the boss". Projects can rapidly get into deep trouble if team members hide their failures, or a significant risk of failure, from the PM. Individuals should have sufficient self - esteem. (Meredith, 2003, p.131)

4.1.3 Time management

Time management is important to any person, but particularly to student organization members and leaders. Time management is a highly personalized skill, and whatever method works for you is the right one. Kleiner and Saifullah in their article "Effective time management" give several techniques for managing time. These are:

"Have a mission: A mission is something to which you are passionately Committed. A mission gives a focus and a direction to our lives. A mission allows us to deal

efficiently with the unexpected and then get right back on purpose with our lives.

Set Challenging Goals: Goals are what moves us towards our mission. If our mission is to develop young people for the company, one of our goals may be to develop a management training program. If our mission is being perceived as the leading company in the industry, the goal for this year may be to increase market share by ten per cent.

Schedule your Work: (1) Make a weekly plan – On Friday afternoons, list the tasks to be accomplished the following week. Do not forget to assign priorities to each. (2) Make a daily schedule by transferring from the weekly plan to the daily to-do list the major task to be done that day. (3) Try to schedule tasks according to your personal energy cycle. Everybody has high and low points during the day. Chart these over a few days to determine your personal cycle. Then schedule your most challenging tasks for your high-energy periods, your routine activities for the low-energy points. (4) Keep your schedule loose – do not pack every minute with scheduled activities. Inevitably, you will be frustrated because interruptions and emergencies will throw you off schedule

Set Priorities: Make to-do lists and prioritize those lists. Write down deadlines, and schedule time toward achieving those deadlines. Schedule exercise time, family time and reading time.

Delegate: Delegation is one of the most important time management Tools. Delegation:

(1) Delegate responsibility for specific tasks or areas to subordinates:

(a) Activities for which subordinates are better qualified;

(b) Routine tasks;

(c) Areas in which subordinates need training and development, and

(d) Activities that offer variety and challenge to a subordinate". (p.p 60-64)

4.1.4 Conflict Approach

Conflict is a fight or disagreement about interests or ideas, values, Opinions roles and objectives. Depending upon intensity it may Positive or Negative effect.

Panjabikesan (2008), suggest several guidelines for managing conflict. These are:

Deal with issues

The intent of any conflict is to have open and honest conversation about different ideas, opinions, values, benefits, attitudes or methods that cause the problem. The intended outcome of the discussion is to change behaviors and actions not personalities. Never allow personal attack.

Recognize goals

Clearly express your intent to work on a solution until everyone is satisfied. In addition ask all the parties to define their goals to help ensure everyone is working towards the objectives.

Discuss tangibles

Sometimes conflicts may be due to differing ethics and principles. In such cases, you should aim at attempting to change the specific beliefs that cause the conflict rather determine if the team involved could make behavioral modifications to eliminate the problem.

Make requests/Not demands

Making people feel pressured to comply will intensify the conflict. Hence ensure making requests and not demands - Also understand their concerns working with them and provide necessary support.

Do not assume

To avoid antagonizing/irritating - Never presume to know what they think and feel. Speak only of what you know. Ask Team to share their thoughts, feeling and objectives.

Be co-operative

This involves approaching the conflict discussions with a Positive attitude. Do not allow the discussions derail by hurtful words or harmful behavior by the team. Listening actively and rephrasing the key points will make the team aware that you are listening to an understanding."

4.1.5 Motivation

Motivation is a desire to achieve a goal, combined with the energy to work towards that goal. Motivation increases performance and productivity. You cannot motivate another person, but you can provide ways to satisfy personal needs so that another person acts.

The environment of your organization can provide opportunities for members to maximize strengths and minimize weaknesses. As a leader, you can help create an environment that encourages members to succeed.

Know your members: it is very important to know the strengths and weaknesses of each, in what area does each want to develop, what kind of work does each one do well or poor, what kinds of rewards does each respond to and what does each need to be successful.

Build trust within your organization: the Project Manager should be visible and available to members. It is important to listen and respond to your members' concerns and feelings. Five ways to build trust:

1. Provide low threat situations and listen to others,
2. Try to remember and use people's first names,
3. Separate projects into manageable parts before asking for volunteers,
4. Get a sense of what people want from you and the organization,
5. Encourage co-operation and teamwork.

Recognize member contributions: Recognition is vital because it shows each individual proof that contributions are valued. Even the smallest contribution deserves some recognition

Confront with a caring attitude: People deserve to be told if their behavior or performance does not meet expectations, but do so with empathy.

4.2 Research

The research took place in Greece, in the Ink Company. Ink was founded in 1991 and since 2000 the company has been in the business of

- a) developing and marketing its proprietary ERP system
- b) acting as an independent IT Integrator, catering for the needs of small-sized business organizations

Ink is growing with fast but stable speed. Currently Ink employs more than 40 people full time, having the employee age average raised to 28 years old. Besides the full time occupied personnel Ink collaborates with external professionals for the implementation of projects that require special expertise.

Ink aims at becoming one of the premier IT Solutions Integration companies in the Greek market. For that, the company focuses on its core business areas and acts as a "one-stop shop" for all their IT needs

The company's priorities are committed to the success of their customers, to succeed the customers' expectations and to deliver excellence in products and services and help them improve their bottom line performance.

4.2.1 Data collection

As the population that would have to answer the questionnaire was 30 employees, the best way to send the

questionnaire was by an email address of the company that all the employees can easily have access to.

4.3 Re- organization of research

Having the Rice questionnaire as the reference basis, a transformation and re- organization of it has been elaborated. Such transformation was deemed as necessary, in order to measure the employees stress by different sources matching with the five qualities of a project manager. In order to re -organize the research I will use the above Job stress scale. For the low stress scale I will use the "upper scores" for all the scales (Interpersonal, Physical, Interest, Total), then I will do the same for the Normal and High stress but I will use the "lower scores" this time: So,

	Questions	Low stress	Normal stress	High Stress
Interpersonal	26	46	51	62
Physical	23	44	48	58
Interest	8	17	18	23
Total	57	111	117	141

Then I will re-order the questions in order to match with the five skills (Leader, Staffing the team, Time management, conflict and motivation), based on the qualitative nature of each Rice's question.

Qualities	Interpersonal	Physical	Interest	Total questions
Leader	4	1	2	7
Staffing the team	5	4	1	10
Time Management	2	9	1	12
Conflict	5	2	0	7
Motivation	10	7	4	21
Total	26	23	8	57

Table 1: Questions refer to skills

As it can be seen from the table above there are 7 questions that refer to Leader, 4 interpersonal, 1 physical and 2 Job interest questions.

Ten questions refer to Staffing the team, 5 interpersonal, 4 physical and 1 Job interest questions.

Twelve questions refer to Time Management, 2 interpersonal, 9 physical and 1 Job interest questions
Seven questions refer to Conflict, 5 interpersonal, 2 physical and 0 Job interest questions

Twenty - one questions refer to Motivation, 10 interpersonal, 7 physical and 4 Job interest questions. From the 57 questions 26 refer to interpersonal factors, 23 questions refer to job interest and only 8 questions refer to job interest.

After using the above two tables I will calculate the NEW job stress scale

	Low stress	Normal stress	High stress
Leader	13	14	18
Staffing the team	19	20	25
Time Management	23	25	30
Conflict	13	14	17
Motivation	40	43	53
Total	107	117	143

Table 2: The New job stress scale

Chapter 5 - Results

5.1 Introduction

This chapter reviews the results of the methodologies and processes described in chapter 4. Additional discussion of these results is included in chapter 6.

5.2 Questionnaire Results

Rice (1998, p.p 200-203) in his book "Stress and Health", gave me the idea for the construction of the questionnaire. In the questionnaire, the respondents will find a scale which comes like this:

Never → **Rarely** → **Sometimes** → **Often** → **Most times**

NEVER: not at all true of your work conditions or feelings

RARELY: the condition or feeling exists about 25% of the time

SOMETIMES: the condition or feeling exists about 50% of the time

OFTEN: the condition or feeling exists about 75% of the time

MOST TIMES: the condition or feeling is virtually always present

First add the values for questions 1-26 which are related to interpersonal factors that can cause stress. Then add the values for questions 27-48 which are related to the physical condition and finally add the values for questions 49-57 which measure job interest. After measuring the sums for each of the following groups and according to the scale in table1 the levels of stress will be measured.

Table 3: The job stress scale

	Low Stress			Normal Stress			High Stress		
Interpersonal	39	43	46	51	54	57	62	68	75
Physical	35	40	44	48	52	55	58	62	67
Interest	13	15	17	18	19	21	23	25	27
Total	91	101	111	117	123	134	141	151	167

The respondent will have to tick one of the five boxes with the given scale. The main purpose of this scale is to create a work stress profile of all the employees, as it will describe the work conditions, the job environment and some personal feelings that the workers encounter in their jobs.

In the interpersonal questions the "Low stress scale" is between 39 and 46, while the "Normal stress scale" is

between 51 and 57 and for the "High stress scale" the score is between 62 and 75.

In the physical condition questions, the "Low stress scale" is between 35 and 44, while the "Normal stress scale" is between 48 and 55 and for the "High stress scale" the score is between 58 and 67.

In the Job interest questions, the "Low stress scale" is between 13 and 17, while the "Normal stress scale" is between 18 and 21 and for the "High stress scale" the score is between 23 and 27.

Finally, the total score for the "Low stress scale" is between 91 and 111, while for the "Normal stress scale" is between 117 and 134 and for the "high stress scale" is between 141 and 167.

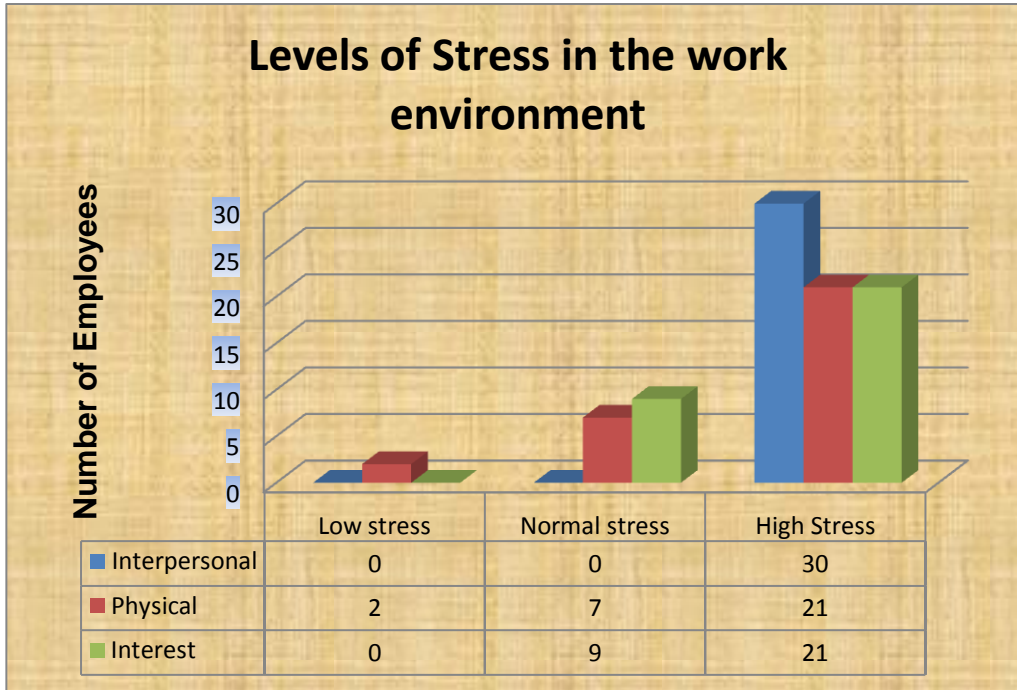


Figure 1: Levels of stress in the work environment

As it can be seen in the diagram above (figure 1), from the total number of the 30 employees, 30 of them (100%), scored a high stress level related to the interpersonal factors.

2 of the employees (6.7%) scored a low stress level related to the physical factors while 7 employees (23.3%) scored a normal stress level related to physical factors and 21 employees (70%), scored a high stress level related to physical factors.

Finally, 9 employees (30%), scored a normal stress level related to job interest factors and 21 employees (70%), scored a high stress level related to job interest factors.

As we can see from the table 3 above, the total questions from the questionnaire are 57. 26 questions referred to interpersonal factors, 23 questions referred to physical condition and 8 questions referred to job interest.



Figure 2: Interpersonal factors

As it can be seen from the diagram above (figure 2) in the interpersonal questions, 4 questions (15%) are referred to leadership, 6 questions (19%) referred to staffing the team, 2 questions (8%) is referred to time management, 5

questions (19%) are referred to conflict and 10 questions (39%) are referred to motivation.

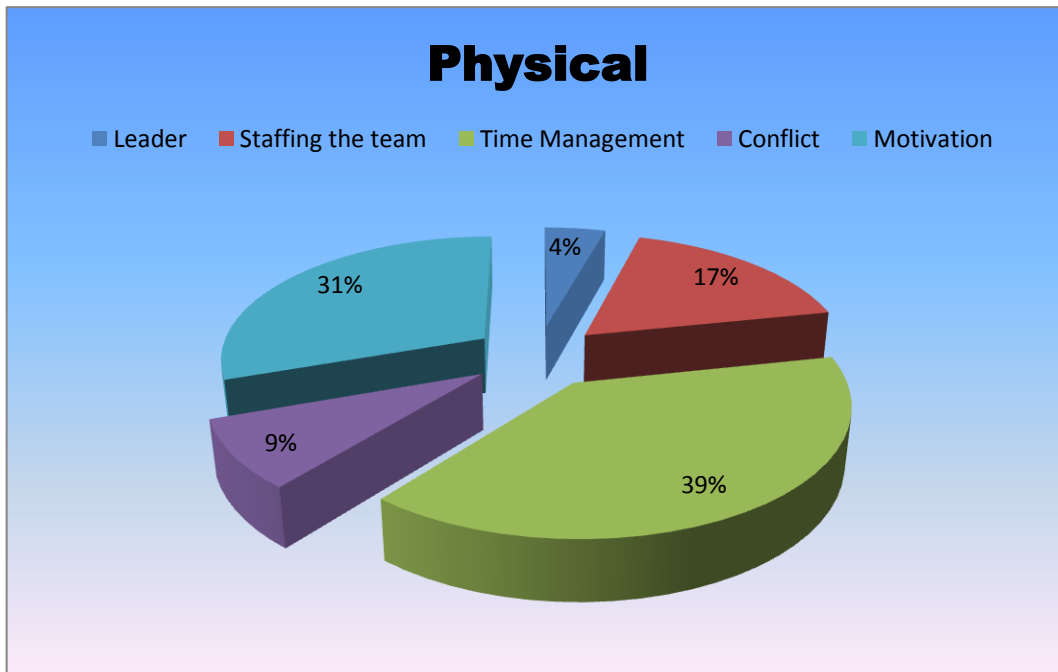


Figure 3: Physical conditions

As it can be seen from the diagram above (figure 3) in the physical condition questions, 1 question (4%) referred to leadership, 4 questions (17%) referred to staffing the team, 9 questions (39%) referred to time management, 2 questions (9%) referred to conflict and 7 questions (31%) referred to motivation

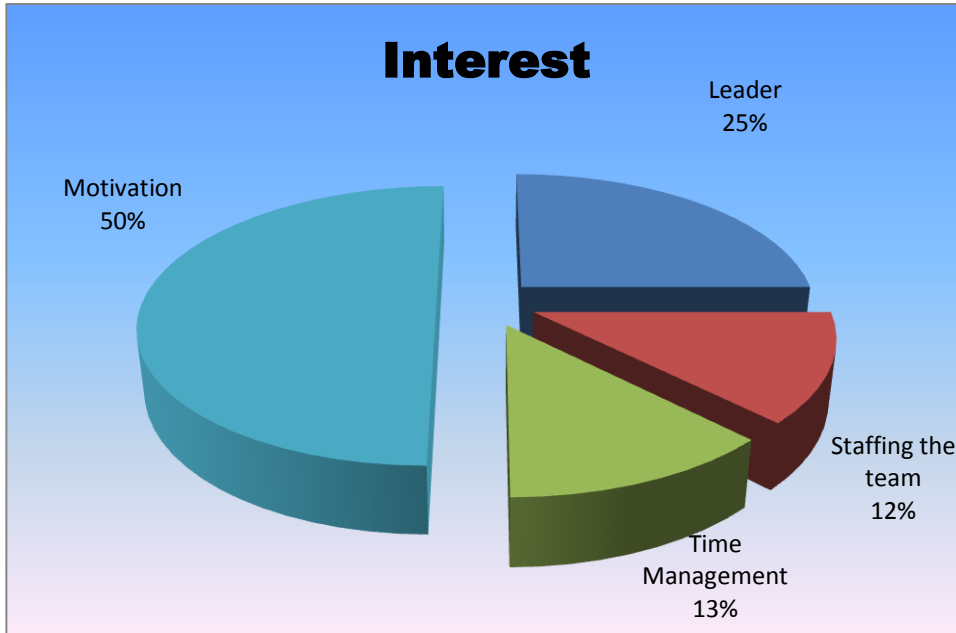


Figure 4: Job interest

In the job interest questions (figure 4), 2 questions (25%) referred to leadership, 1 question referred to Staffing the team and time management, and finally 4 questions (50%) referred to motivation.

Finally, after analyzing the data from the questionnaires and after using the new job stress scale I will highlight the level of stress in each of the five skills

Qualities	Low stress	Normal stress	High Stress	Total
Leader	0	4	26	30
Staffing the team	0	2	28	30
Time Management	0	2	28	30
Conflict	7	10	13	30
Motivation	0	2	28	30

Table 4: Level of stress in each skill

In the leader skill 4 people has Normal stress and 26 has High stress

In the Staffing the team skill, 2 people has Normal stress and 28 has High stress

In Time Management skill, 2 people has Normal stress and 28 has High stress

In the Conflict skill, 7 people have low stress, while 10 people have Normal stress and 13 people have High stress.

In the Motivation 2 people has Normal stress and 28 has High stress

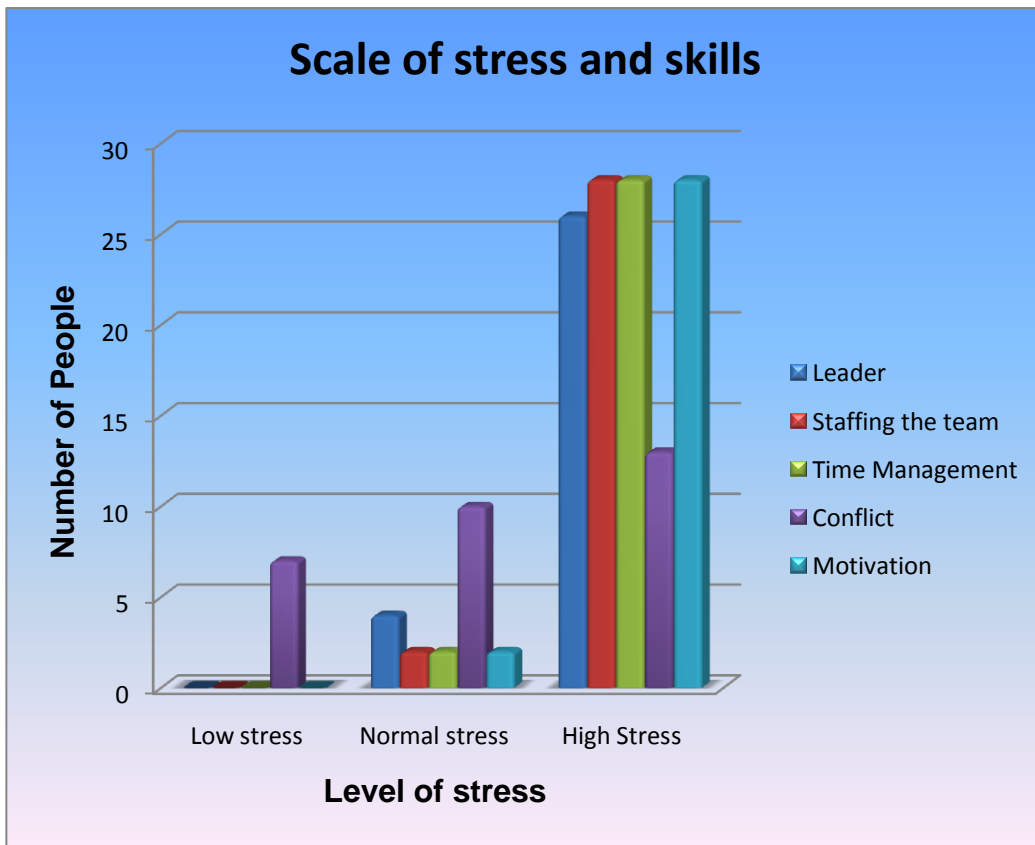


Figure 5: Stress and skills scales

As we can see from the diagram above (figure 5), all the skills that a project manager should have in order to be effective are presented in high stress scale.

From the 30 people that answered my questionnaires, 26 of them believe that they have high stress in the leadership, 28 of them believe that they have high stress in staffing the team, in time management and motivation and only a small number of people believe that the high when facing conflicts.

Only 4 people believe that they have normal stress in leadership, 2 people believe that have normal stress in staffing the team, in time management and in motivation and 10 people believe that have normal stress in conflicts 7 people believe that they have low stress when they facing conflicts in the business environment.

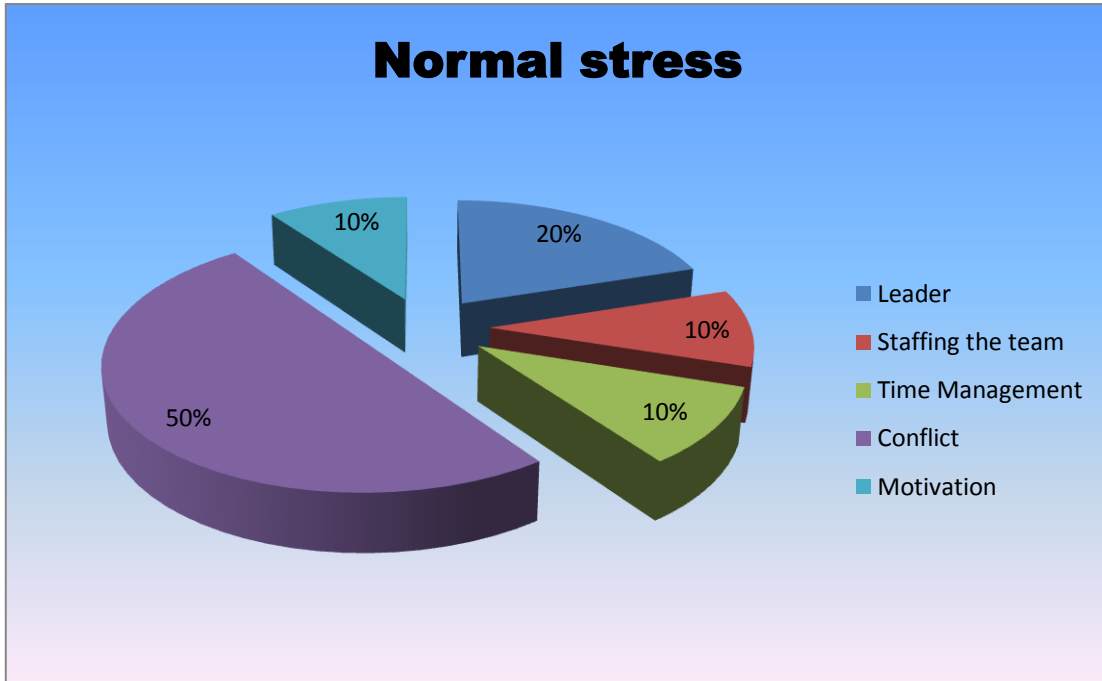


Figure 6: Normal stress scale

As it can be seen in the diagram above (figure 6), 20% from people that answered the questionnaires believe that has normal stress when they are facing leadership, 10% from people believe that has normal stress in staffing the team, in time management and in motivation. 50% of people believe that has normal stress in conflicts

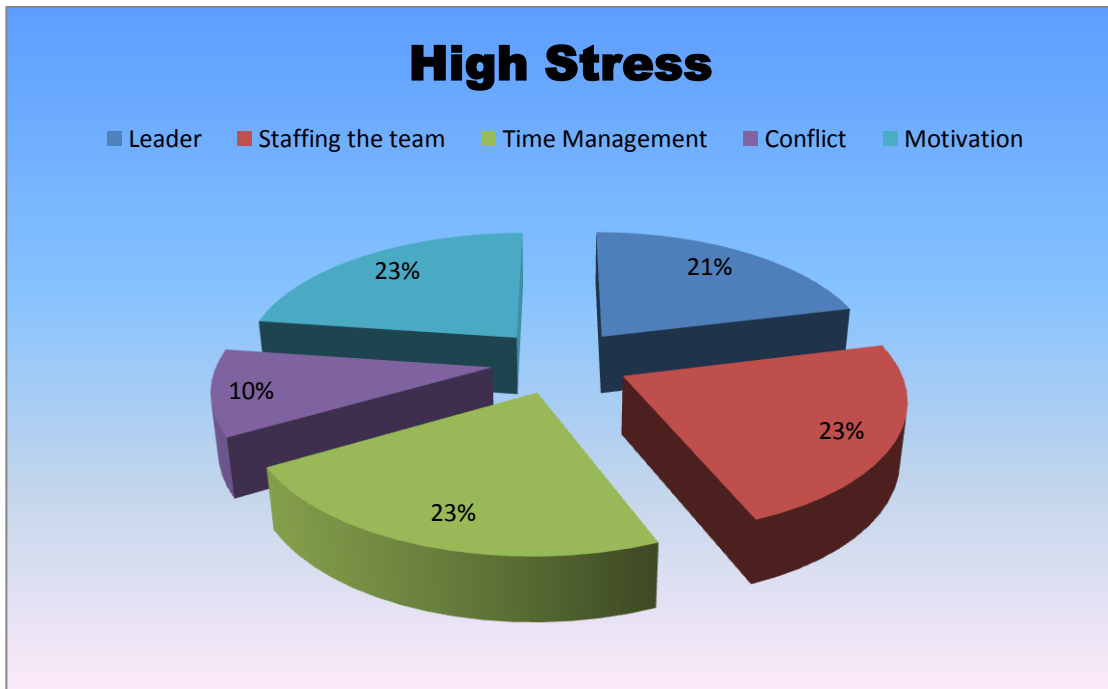


Figure 7: High stress scale

As it can be seen in the diagram above (figure 7), 21% from people that answered the questionnaires believe that has high stress in leadership, 23% of people believe that has high stress in staffing the team, in time management and in motivation and 10 % has high stress in conflicts.

Chapter 6 - Discussion, Conclusions, Recommendations

6.1 Discussion, Conclusions

Based on the evaluation of the key concepts of this study, I realized that stress and project manager is familiar meanings. Every project manager in every work has to deal with stress and he should have the appropriate abilities to handle stress not only for himself but also and in his project team. A project manager if he wants to be effective, he should focus on the five skills.

- To be a leader
- To have the ability to staff the project team
- To use time management strategies
- To use conflict resolution methods
- To have the ability to motivate the project team

The major outcome of the above skills is to increase the project team morale in order to be more active in the business environment without conflicts and misunderstandings.

More precisely, in Ink Company there was lack of a project manager. A project manager has some skills that are

very important for the smooth operation of the project team.

A successful project manager should have the flexibility to deal with team members who may need specific, firm direction. PM should be able to adopt various styles of leadership with various people; a project manager should be trustworthy, competent, dependable and honest. A project manager should be tolerant. A non tolerant Project Managers becomes stressed when working with ambiguous projects. While dealing with varied group of stakeholders having different objectives and opinions.

Project Managers should be able to approach each group with understanding and tolerance for successful project completion. A project manager should be innovative with solutions as the resources and capabilities needed to complete a project may be scarce and finally, project managers must be available to spend time with various people involved in the project for ensuring project success.

For the above reasons the lack of a project manager in Ink company was devastating. In the questionnaires results the majority of the people who answered the questions feel "high stress" in their business environment when they deal with leadership, staffing the team, time management and

motivation. When they deal with conflict the results are shared among "low stress", "normal stress" and "high stress", which most probably means that in the business environment the employees are trying to "hook" from each other in order to avoid conflicts.

Types of Managerial Actions that Cause Workplace stress

1) Poor communications

a. Employees experience continuing surprises, they aren't informed of new

decisions, programs, etc.

b. Employees don't understand reasons for decisions, they aren't involved in

decision - making.

c. As a result, employees trust the "rumor mill" more than management.

2) The orientation or the amount of resources is insufficient.

There is:

a. Disagreement about "who does what".

b. Stress from working with inadequate resources.

3) "Personal chemistry", including conflicting values or actions among managers and employees, for example:

- a. Strong personal natures don't match.
 - b. We often don't like in others what we don't like in ourselves.
- 4) Leadership problems, including inconsistent, missing, too-strong or uninformed leadership (at any level in the organization), evidenced by:
- a. Avoiding conflict, "passing the buck" with little follow-through on decisions.
 - b. Employees see the same continued issues in the workplace.
 - c. Supervisors don't understand the jobs of their subordinate

6.2 Recommendations

Mr Flannes (2006, p.p 25-35) in his book (Essential People Skills for Project Managers) mentioned that "a real project manager should be: a) a leader, b) a manager, c) a facilitator, and d) a mentor". So, Ink Company in order to handle the workplace stress should hire immediately an experience project manager who is going to be responsible for building and managing an effective project team.

First of all, the project manager as a leader should take some actions in order to handle the stress situation in his project team.

According to "Help Guide" the project manager should take the actions below to increase the morale of the employees:

a) "Improve communication"

- Share information with employees to reduce uncertainty about their jobs and futures.
- Clearly define employees' roles and responsibilities.
- Make communication friendly and efficient, not mean-spirited or petty
- Hold regular one-to-one meetings to ensure that individuals are clear about their role
- Hold team meetings to enable team members to clarify their role and discuss any possible role conflict

b) Consult the employees

- Give workers opportunities to participate in decisions that affect their jobs.
- Consult employees about scheduling and work rules.
- Be sure the workload is suitable to employees' abilities and resources; avoid unrealistic deadlines.

- Show that individual workers are valued.
- Make sure his staff has a clearly defined role

c) Offer rewards

- Praise good work performance verbally and institutionally.
- Provide opportunities for career development.
- Promote an "entrepreneurial" work climate that gives employees more control over their work.
- Give support and encouragement to staff, even when things go wrong

d) Cultivate a friendly social climate

- Provide opportunities for social interaction among employees.
- Make management actions consistent with organizational values".

By taking all the actions above the project manager will reduce the number of employees who answered that their job is not well defined. He will also reduce the number of those who are not sure what will be expected of them now or in the future.

Furthermore, the project manager will increase the employees' autonomy in carrying out their job duties, while

he will give them a sense of shaping their own destinies in this job. Moreover the project manager will show that appreciates the abilities of his team member.

In case hiring a PM turns out to be something of an extreme importance and need, I suggest after a reasonable time period (of at least 6 months) the research to be repeated, the levels of stress to be re-examined so the PM'S positive reflection towards the stuff would eventually be confirmed...

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Appendix A

Questionnaire to the employees

PERSONAL INFORMATION

Sex: Male Female

Age:

Educational Background:

High school Technical School University

NOTE: Complete the survey at your own pace.

THIS SURVEY IS COMPLETELY ANONYMOUS. PLEASE **DO NOT** INDICATE
NAME / POSITION e.t.c

The following statement describes work conditions, job environments, or personal feeling that workers encounter in their jobs.

After reading each statement, circle the answer that best reflects the working conditions at your place of employment. If the statement is about a personal feeling, indicate the extent to which you have the feeling about your job. The scale markets ask you to judge, to the best of your knowledge, the approximate percentage of time the condition or feeling is true.

NEVER: not at all true of your work conditions or feelings

RARELY: the condition or feeling exists about 25% of the time

SOMETIMES: the condition or feeling exists about 50% of the time

OFTEN: the condition or feeling exists about 75% of the time

MOST TIMES: the condition or feeling is virtually always present

SECTION 1: Interpersonal questions

		Never	Rarely	Sometimes	Often	Most Times
1	Support personnel are Incompetent or inefficient	1	2	3	4	5
2	My job is not very well defined	1	2	3	4	5
3	I am not sure about what is expected of me	1	2	3	4	5
4	I am not sure about what is expected of me in the future	1	2	3	4	5
5	I cannot seem to satisfy my superiors	1	2	3	4	5
6	I seem to be able to talk with my superiors	1	2	3	4	5
7	My superiors strike me as incompetent, yet I have to take orders from them	1	2	3	4	5
8	My superiors seem to care about me as a person	1	2	3	4	5
9	There are feelings of trust, respect, and friendliness between me and my superiors	1	2	3	4	5
10	There seems to be tension between administrative personnel and staff personnel	1	2	3	4	5
11	I have autonomy in carrying out my job duties	1	2	3	4	5
12	I feel as though I can shape my own destiny in this job	1	2	3	4	5
13	There are too many bosses in the area	1	2	3	4	5
14	It appears that my boss has "retired on the job"	1	2	3	4	5

15	My superiors give me adequate feedback about my performance	1	2	3	4	5
16	My abilities are not appreciated by my superiors	1	2	3	4	5
17	There is little prospect of personal or professional growth in this job	1	2	3	4	5
18	The level of participation in planning and decision making at my place of work is satisfactory	1	2	3	4	5
19	I feel that I am over-educated for this job	1	2	3	4	5
20	I feel that my educational background is just right for this job	1	2	3	4	5
21	I fear that I will be laid off or fired	1	2	3	4	5
22	In-service training for my job is inadequate	1	2	3	4	5
23	Most of my colleagues are friendly or seem uninterested in me as a person	1	2	3	4	5
24	I feel uneasy about going to work	1	2	3	4	5
25	There is no release time for personal affairs or business	1	2	3	4	5
26	There is obvious sex/race/age discrimination in this job	1	2	3	4	5

NOTE: Complete the entire questionnaire first.
Then add all the values circled for questions 1-26 and enter here

Total 1-26

SECTION 2: Physical Condition questions

	Never	Rarely	Sometimes	Often	Most Times
27 The physical work environment is crowded, noisy, or dirty	1	2	3	4	5
28 Physical demands of the job are unreasonable (heavy lifting, extraordinary periods of concentration required)	1	2	3	4	5
29 My work load is never ending	1	2	3	4	5
30 The pace of work is too fast	1	2	3	4	5
31 My job seems to consist of responding to emergencies	1	2	3	4	5
32 There is no time for relaxation, coffee breaks, or lunch breaks on the job	1	2	3	4	5
33 Job deadlines are constant and unreasonable	1	2	3	4	5
34 Job requirements are beyond the range of my ability	1	2	3	4	5
35 At the end of the day, I am physically exhausted from work	1	2	3	4	5
36 I can't even enjoy my leisure because of the toll my job takes on my energy	1	2	3	4	5
37 I have to take work home to keep up	1	2	3	4	5
38 I have responsibility for too many people	1	2	3	4	5
39 Support personnel are too few	1	2	3	4	5

40	Support personnel are incompetent or inefficient	1	2	3	4	5
41	I am not sure about what is expected of me	1	2	3	4	5
42	I am not sure about what is expected of me in the future	1	2	3	4	5
43	I leave work feeling burned out	1	2	3	4	5
44	There is little prospect for personal or professional growth in this job	1	2	3	4	5
45	In service training for my job is inadequate	1	2	3	4	5
46	There is little contact with colleagues on the job	1	2	3	4	5
47	Most of my colleagues are unfriendly or seem uninterested in me as a person	1	2	3	4	5
48	I feel uneasy about going to work	1	2	3	4	5

NOTE: Complete the entire questionnaire first.
Then add all the values circled for questions 27-48 and enter here

Total 27-48

SECTION 3: Job Interest questions

	Never	Rarely	Sometimes	Often	Most Times
49 The complexity of my job is enough to keep me interested	1	2	3	4	5
50 My job is very exciting	1	2	3	4	5
51 My job is varied enough to prevent boredom	1	2	3	4	5
52 I seem to have lost interest in my work	1	2	3	4	5
53 I feel as though I can shape my own destiny in this job	1	2	3	4	5
54 I leave work feeling burned out	1	2	3	4	5
55 I would continue to work at my job even if I did not need the money	1	2	3	4	5
56 I am trapped in this job	1	2	3	4	5
57 If I had it to do all over again, I would still choose this job	1	2	3	4	5

NOTE: Complete the entire questionnaire first.
Then add all the values circled for questions
49-57 and enter here

Total 49-57

Last, enter those sums for each of the following groups of questions and add them all together to get a cumulative total and according to the scale in figure 1 the levels of stress will be measured.

QUESTIONS:

1-26	27-48	49-57	TOTAL
Interpersonal	Physical Condition	Job Interest	1 - 57
<input style="width: 80px; height: 30px;" type="text"/>	+	<input style="width: 80px; height: 30px;" type="text"/>	+
		<input style="width: 80px; height: 30px;" type="text"/>	=
			<input style="width: 80px; height: 30px;" type="text"/>

	Low Stress			Normal Stress			High Stress		
Interpersonal	39	43	46	51	54	57	62	68	75
Physical	35	40	44	48	52	55	58	62	67
Interest	13	15	17	18	19	21	23	25	27
Total	91	101	111	117	123	134	141	151	167
Percentile	10	20	30	40	50	60	70	80	90

Figure 1: The job stress scale

